Problem 1: Gas Discount

Overview

Many grocery stores offer discounts on gasoline purchases based upon participation in “loyalty programs”. One particular store, which we will call “Spot-Dixie”, runs a program as follows:

- For each full dollar that you spend on a given trip to the grocery store, you earn one “point”.
- For each 100 points that you have, you earn a ten-cent per gallon discount on gas purchases.

In neither case do any excess amounts carry over. Thus, a purchase of $17.34 earns only 17 points and a purchase the next day of $0.99 would earn no points. Similarly, having 293 points entitles the customer to a twenty-cent discount (not twenty-nine cents or any other such amount).

Problem

In this problem, you will be given the amount spent on a series of trips to the grocery store and the base (undiscounted) price of gasoline. It is your job to compute the discount and the net price of the gasoline.

Input

The input is a single line containing six currency amounts (no dollar signs) separated by one or more spaces. The first five amounts represent purchases made at the grocery store; the last is the price per gallon of gasoline. All numbers will be positive currency amounts, i.e. with two digits after the decimal point, less than 1000.

Output

The output is a single-line message, formatted EXACTLY as in the examples indicating the discount earned and the net price (per gallon) of the gasoline to be purchased. In no case, will the price (with discount) ever be negative. (Note the single space after the “$” and on either side of the dash.)

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1 Values which are correct when rounded to two decimal digits will be accepted regardless of accuracy in the later decimal places.
Example 1

Input

84.21 19.21 103.00 9.95 73.45 3.61

Output  (On a single, non-indented line; ignore the word-wrap)

You earned a discount of 20 cents per gallon; the price per gallon is therefore $ 3.41 – CONGRATULATIONS!

Example 2

Input


Output  (On a single, non-indented line; ignore the word-wrap)

You earned a discount of 0 cents per gallon; the price per gallon is therefore $ 3.2499997 – CONGRATULATIONS!

2 Showing acceptable rounding; most solutions will get this one precisely and will display extra decimal places in the first example, but we wanted to show that all valid roundings will be accepted.